Amendments to the claims

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of claims:

1. (currently amended) A centrifuge for the separation and/or treatment of cells in a substantially annular or partially annular separation bag connected by at least one tube to at least one secondary bag, comprising:

a rotor including:

a rotor shaft having:

a rotation axis, and

a hollow upper portion defining a central compartment extending around the rotation axis and having an upper opening for receiving the at least one secondary bag;

a rotor bowl connected to the rotor shaft so as to be centred with respect to the rotation axis, and connected to the hollow upper portion of the rotor shaft and having:

a separation compartment for receiving the separation bag, and

an expandable hydraulic chamber located within the separation compartment for selectively squeezing the separation bag within the separation compartment so as to transfer a separated component from the separation bag into a secondary bag in the central compartment;

a hydraulic system connected to the hydraulic chamber by a duct extending through the rotor shaft for pumping a hydraulic liquid to and from the hydraulic chamber.

2. (previously presented) The centrifuge according to claim 1, further comprising:

pinch valves for the at least one tube connecting the separation bag to the at least one secondary bag.

3. (previously presented) The centrifuge according to claim 2, further comprising:

an automatic programmed control system for controlling the pinch valves.

4. (cancelled)

5. (currently amended) The centrifuge according to claim 1 ~~4~~, wherein the ~~means for selectively squeezing the separation bag further~~ expandable hydraulic chamber comprises:

a flexible membrane secured to the rotor bowl. ~~so as to define a hydraulic chamber within the separation compartment;~~

~~a hydraulic system connected to the hydraulic chamber by a duct extending through the rotor shaft for pumping a hydraulic liquid to and from the hydraulic chamber.~~

6. (previously presented) The centrifuge according to claim 1, wherein the separation compartment further comprises:

a frusto-conical support surface for supporting the separation bag.

7. (previously presented) The centrifuge according to claim 6, wherein the frusto-conical support surface of the separation compartment flares from the hollow upper portion of the rotor shaft below the opening of the central compartment.

8. (previously presented) The centrifuge according to claim 6, wherein the frusto-conical support surface of the separation compartment flares from the hollow upper portion of the rotor shaft above the opening of the central compartment.

9. (currently amended) The centrifuge according to claim 1 for the separation and/or treatment of cells in a container system ~~wherein the container system further comprises~~ comprising:

the substantially annular or partially annular separation bag ~~having~~

~~an outer periphery and~~

~~an inner periphery;~~

the at least one secondary bag;

the at least one tube connecting the separation bag to the at least one secondary bag; and

a container for receiving the at least one secondary bag and designed to removably fit within the central compartment defined by the hollow upper portion of the rotor shaft of the centrifuge.

10. (currently amended) A container system for the separation and/or treatment of cells in a centrifuge according to claim 1, wherein the container system ~~further~~ comprises:

the a substantially annular or partially annular separation bag having:

an outer periphery and

an inner periphery;

the at least one secondary bag;

the at least one tube connecting the separation bag to the at least one secondary bag;

~~a~~ an oblong container having:

an upper portion surrounding an upper opening,

wherein the container is designed for receiving the at least one secondary bag in a substantially upright position and to removably fit within the central compartment defined by the hollow upper portion of the rotor shaft of a centrifuge, and

wherein the separation bag is removably secured to the upper portion of the container by an area thereof adjacent its inner periphery.

11. (currently amended) The container system according to claim 10, wherein the container further ~~comprising~~ comprises a sleeve having a flange extending outwardly at an upper portion thereof.

12. (previously presented) The container system according to claim 11, wherein the sleeve is made of a rigid plastic material.

13. (previously presented) The container system according to claim 11, wherein the sleeve directly fits within the central compartment.

14. (previously presented) The container system according to claim 11, wherein the sleeve fits within the central compartment through spacing elements that keeps the sleeve centred about a central axis of the central compartment.

15. (previously presented) The container system according to claim 11, wherein the separation bag is secured to the flange of the container by an area thereof adjacent its inner periphery.

16. (currently amended) The container system according to claim 11, wherein the separation bag further comprises:

holes in an area adjacent its inner periphery; and

the container further ~~compricing~~ comprises:

pins protruding from an upper surface of the flange for fitting the holes of the separation bag.

17. (previously presented) The container system according to claim 11, comprising at least two secondary bags formed by stacked sheets of flexible plastic material that are welded together at a periphery thereof.

18. (previously presented) The container system according to claim 11, further comprising:

a first secondary bag connected to the separation bag by a tube including:

a one-way valve allowing a flow of liquid from the first secondary bag to the separation bag, and

a second secondary bag connected to the separation bag by a tube including:

a one-way valve allowing a flow of liquid from the separation bag to the second secondary bag.

19. (previously presented) The container system according to claim 11, wherein the at least one tube is connected to the separation bag at the inner periphery thereof.

20. (previously presented) The container system according to claim 11, wherein the at least one tube comprises:

a portion of tube having a first end connected to the separation container and a second end that branches into a first tube portion connected to a first secondary bag and

a second tube portion connected to a second secondary bag.

21. (previously presented) The container system according to claim 11, further comprising:

a first secondary bag containing a washing liquid and

a second secondary bag intended to receive a waste liquid.

22. (previously presented) The container system according to claim11, wherein the at least one secondary bag is made of a plastic material that is suited for storing a thrombocyte suspension.

23. (new)A centrifuge for the separation and/or treatment of cells in a substantially annular or partially annular separation bag connected by at least one tube to at least one secondary bag, comprising:

a rotor including:

a rotor shaft having:

a rotation axis, and

a hollow upper portion defining an oblong central compartment extending around the rotation axis and having an upper opening for receiving the at least one secondary bag in a substantially upright position;

a rotor bowl connected to the rotor shaft so as to be centred with respect to the rotation axis, and connected to the hollow upper portion of the rotor shaft and having

a separation compartment for receiving the separation bag having:

a frusto-conical support surface for supporting the separation bag, wherein the support suface flares from the upper opening of the central compartment.

24. (new) A container system for the separation and/or treatment of cells in a centrifuge according to claim 1, wherein the container system comprises:

a separation bag;

a first secondary bag;

a second secondary bag;

at least one tube connecting the separation bag to the at least one first and second secondary bags, the at least one tube comprising:

a first tube portion having a first end connected to the separation container and a second end;

a second tube portion having a first end connected to the second end of the first tube portion and a second end connected the first secondary bag; and

a third tube portion having a first end connected to the second end of the first tube portion and a second end connected the second secondary bag, and

a container for receiving the first and second secondary bags in a substantially upright position and designed to removably fit within the central compartment defined by the hollow upper portion of the rotor shaft of a centrifuge.